



## EQIP Activity Sheet: *EAS590-7*

# Nutrient Management with Variable-Rate Anhydrous Ammonia and/or Liquid Nitrogen Solutions

### Minimum Criteria to Qualify for the Nutrient Management with Variable-Rate Anhydrous Ammonia and/or Liquid Nitrogen Solutions Incentive

Purpose: To increase nutrient utilization efficiency and reduce nitrogen losses by (i) targeting nitrogen applications using variable-rate technology, (ii) documenting the actual application of nitrogen using GPS-enabled as-applied mapping, and (iii) documenting the results of variable-rate nitrogen applications using GPS-enabled yield maps, within the Nutrient Management (590) conservation practice standard.

**Note: This incentive applies only on tracts having no fields where variable-rate technology for application of anhydrous ammonia and/or liquid nitrogen solutions has been used prior to signing a contract.**

#### **General Criteria:**

- The incentive applies to fields on which
  - anhydrous ammonia and/or liquid nitrogen solutions are applied according to a recommendation (prescription) map using variable-rate application equipment
- AND
- the application of anhydrous ammonia and or liquid N is documented using GPS-enabled as-applied maps.
- Variable-rate applications of nitrogen shall not be made more than 30 days prior to the anticipated planting date.
- Recommendation maps that guide variable-rate nitrogen shall be developed prior to nitrogen fertilizer application and shall be based on at least one or any combination of the following:
  - yield maps for the crop from at least three previous crop years
  - soil survey map units
  - soil condition maps based on grid soil samples (e.g., soil organic matter, soil residual nitrate) representing areas of < 3 acres
  - soil condition maps based on continuously-sampled soil areas (e.g., soil electrical conductivity, soil organic matter from optical sensing technology) when based on areas no larger than 3 acres
  - aerial or satellite images of
    - bare soil color or spectra
    - crop condition (canopy color or spectra)
    - crop condition to guide in-field plant tissue testing (e.g., aerial images used to guide petiole testing for cotton).

*For additional information contact your local USDA Service Center.*

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- The Nutrient Management (590) conservation practice standard requires development of a budget of nutrients (NPK) applied and utilized during the soil test cycle. For purposes of the budget, nitrogen applied and documented by an as-applied map may be averaged for field areas of no more than 80 acres. If it is necessary to average within field areas greater than 80 acres, a justification for this decision must be included in the nutrient management plan.
- Average application rates for as-applied nitrogen application maps (as-spread maps) will be within 10% of field-average rates in the recommendation maps (prescription maps).

#### **Documentation Required:**

- A field-average budget of nutrients applied and utilized for crop production during the soil test cycle.
- Nitrogen recommendation maps for each field.
- Dated as-applied (as-spread) maps depicting actual rate of nitrogen applied to each spreading unit. Pounds of material applied should be in same form as recommendations. Example: If recommendations are in lbs of N the as-applied map should also be presented in lbs of N instead of lbs of UAN (urea ammonium nitrate solution).
- Receipts for all forms of nitrogen fertilizer used and amount applied.
- Certification that requirements of the Nutrient Management (590) conservation practice standard were achieved. The individual certifying completion of the practices required by this incentive must complete and sign the MO-CONS-10 (<http://www.mo.nrcs.usda.gov/technical/forms/general.html>) or an equivalent form.